loss being water. The residue should be burned in an open capsule carefully, for large quantities of carburetted hydrogen are generated, which puff up the mass, and render it liable to be lost over the sides of the vessel. When the gas ceases to escape, the calcination should be continued in a platinum crucible; but even here the perfect elimination of the carbon is very difficult.

A physician, furnished with two of these glass-stopped tubes, or even with two common test tubes well corked, can fill them, and hand them to the chemist, without any necessity for previously defibrinating the blood. And by this method, also, the fibrine is perfectly separated, which is not always the case when the blood is beaten. The other ingredients of the blood, as the fatty matters, urea, seroline, &c., can also be estimated. Although this is rarely desired by the physician.

ART. VI.—*The Meteorology, Sanitary Condition, Prevailing Diseases, and Mortuary Statistics of Memphis, Tennessee, in* 1852. By GEORGE R. GRANT, M. D.[1]

FOR the past two years the writer has kept a monthly journal of the prevailing diseases of Memphis; and it is singular to observe, on a comparison of the maladies of each month, of these two years, how very nearly the disorders of the one correspond with those of the other. This analogy in the diseases of the respective months of these two sickly seasons is the more remarkable from the fact that the *meteorological* conditions were, in some important respects, widely different. During the months of May, June, July, August, and September—when the sickness and mortality are greatest among our population—there fell, in 1851, only 6.88 inches of *rain;* whilst, in 1852, during the same periods of time, the quantity amounted to 18.60 inches. The parching drought of the former, when *four* inches of the quantity of rain mentioned was distributed among the four last-named months, with but six entire cloudy days in the time, is in marked contrast with the *fourteen* inches of rain which fell in the same months of 1852, with clouds and breezes to temper the rays of a summer's sun.

The annexed tables will show the maximum and minimum ranges of the barometer and thermometer, with the monthly mean, and the quantity of rain which fell in each month of the past year. It has been compiled from the meteorological journal kept at the Memphis Navy Yard, by order of the government, for the use of the Smithsonian Institution.

[1] This paper was prepared for Dr. Sutton, of Georgetown, Ky., chairman of a committee appointed to report on the Epidemics of Tennessee and Kentucky, at a meeting of the "American Medical Association," to convene in New York, in May, 1853.

1852.	BAROMETER.			THERMOMETER.			RAIN.[1]
Months.	Maximum.	Minimum.	Mean.	Max.	Min.	Mean.	Quantity in inches.
January	31.01	29.23	30.12	66°	02°	33°	1.60
February	29.79	29.21	29.50	65	32	51	6.14
March	29.78	29.13	29.45	87	25	56	2.23
April	29.58	29.00	29.29	85	37	61	3.68
May	29.75	29.32	29.53	91	45	66	4.43
June	29.77	29.32	29.54	96	50	73	2.51
July	29.70	29.45	29.57	99	61	80	1.83
August	29.70	29.39	29.54	97	55	76	6.28
September	29.68	29.38	29.53	95	48	71	3.55
October	29.78	29.22	29.50	88	40	64	2.00
November	29.74	29.12	29.43	76	28	52	4.97
December	29.84	29.12	29.48	70	28	49	7.66

It is easy to conceive how very different would be the condition of the vegetable kingdom under the opposite states of dryness and moisture characteristic of the two past years, in this place. In 1851, vegetation was literally burnt up. In 1852, it was luxuriant and abundant. Notwithstanding these dissimilar meteorological conditions, and the influences which they manifestly exerted on some portions of animated nature around us, an examination of our records but too truly proves, that the causes of disease and death amongst our population were very slightly, if at all, controlled by these differences in the seasons.

During the four hot and *dry* months of 1851 (from June to September inclusive), the sickness was extensive, the numbers dying in this period reaching 363, the hospital mortality, which was a fraction over 24 per cent., not included; whilst, in the corresponding months of the past *wet* summer, the deaths reported by the Board of Health were 348; the deaths at the hospital excluded, as the manner in which the returns from it were furnished, for the past year, entitles them to no consideration as matters of fact.

According to our mortuary records, the total of deaths, leaving out the hospital, was 715, in 1851. Of this number, *over one-half died* during the four months just alluded to. The difference in the mortality for the same months of the past season was only *fifteen* less than the previous one, the whole number of deaths for the time specified being 348, in 1852. And here we will take occasion to observe that the prevailing diseases which induced this mortality were, with a slight exception hereafter to be mentioned, identically the same in both years.

The following statement of the mortuary statistics, collected from the weekly returns made to the Secretary of the Board of Health, for the past

[1] The quantity of rain which fell in 1851, in all, was 34.89 inches; in 1852, it amounted to 48.88 inches, making a difference between the two years of 12 inches, in round numbers.

year, will show the aggregate number of deaths, in each month, of the two races, with a condensed account of the different ages of the deceased.

Months.	White males.	White females.	Coloured.	Total.
January	12	14	12	38
February	18	10	4	32
March	9	14	7	30
April	20	8	7	35
May	28	16	11	55
June	54	36	29	119
July	44	37	23	104
August	34	11	13	58
September	36	18	13	67
October	34	12	18	64
November	32	14	10	56
December	24	16	8	48
	345	206	155	706

Of these there died of—

5 years of age and under	263
From 5 to 10 years	29
" 10 to 20 "	57
" 20 to 30 "	131
" 30 to 40 "	87
" 40 to 50 "	45
" 50 to 60 "	24
" 60 to 70 "	9
Over 70 years	13
Persons whose ages are not recorded	48
Total	706

When we take into consideration the prevailing diseases, and the strange coincidence of the fatality which attended them, notwithstanding the marked dissimilarity of the meteorological phenomena that accompanied the two past sickly years, in Memphis, we are led to infer that we have in our midst a class of *local agents*, of our own creation, to whose baneful influences most of our diseases owe their origin, independently, to a considerable extent, of the influences exerted by heat and moisture either singly or conjointly.

As the agencies here alluded to were pointed out, somewhat in detail, in a paper of mine, published in the May number of the *New Orleans Med. and Surg. Journ.* of last year, I shall take the liberty to transcribe from that article the points having a direct bearing on this branch of our subject. Before giving these extracts, it will be best, perhaps, to precede them by a short topographical sketch of this locality.

Memphis is situate on a high "bluff"—some fifty feet or more above the high-water mark of the Mississippi River—in latitude 35° 8′ north. The soil on which the city is built is purely *alluvial*, and reposes on a bed of sand, containing the remains of the *testacea* of former times. In digging for *wells*,

no rock of any kind is met with; water being generally found on reaching the sand-bed. This well-water is more or less impregnated with the sulphate of lime, which it derives from the decomposing shells among which it percolates.

Few places possess better natural advantages than this to make it one of the *cleanliest* cities in the Union. Yet it is a lamentable fact, that the same neglect of every system of public hygiene is nowhere else to be found in any civilized community that we have either seen or read of. There is not a *scavenger* in the employment of the city; whatever is done in that line, is effected through the voluntary acts of the *dogs* and the *hogs*. The condition of things, as portrayed in the following quotations from the paper above alluded to, are still in existence, without much apparent probability that they will be shortly remedied:—

"That abundant sources for contaminating the *purity of the atmosphere* exist in this city, no one, at all competent to judge of the subject, will be disposed to deny. On examination, it will be seen that the *grading* of the streets has caused their elevation, in many places, several feet above the level of the contiguous lots; and that, as a consequence, the spaces included between lines of streets crossing each other at right angles, become, in wet weather, *artificial ponds*, without an outlet, containing more or less of organic remains; where the only authorized *scavengers*—as if conscious that these receptacles of filth were prepared expressly for their use, as a compensation for services rendered—have rooted and wallowed in seeming pride, and self-satisfied indulgence.

"Whoever will traverse the alleys running parallel with our principal streets, and dividing the lots fronting on the latter from each other, will see enough of dirt and filth, not only in these alleys, but in the rear part of most of the improved places in Memphis, to satisfy the most casual observer that cleanliness of our streets and inclosures is not an important item in our domestic or city regulations. On inspecting these alleys—on which the temples of Cloacina are here mostly located—we shall have presented to our gaze the disgusting spectacle of accumulated piles of 'night-soil,' and the olfactories will be greeted with odours, which remind one neither of 'the sweet scents of Arabia,' nor of 'the pure waters of Helicon.'

"Aside from the disgust excited by seeing exposed to view piles of human fecal deposits, it may be safely questioned whether, in this form, they are as prejudicial to health as are the same materials accumulated in the narrow and shallow pits required for their concealment, by the laws of the city. Pits nine feet *deep*, and three or four feet *wide*, walled in with bricks and mortar, only serve to place the effete matters they contain sufficiently near the surface to undergo rapidly the putrefactive process, in warm weather; whilst the chance of speedy desiccation is prevented by the fluids in which they are kept constantly immersed.

"On some of our principal streets, and in the midst of the most populous and business parts of the city, there are ranged along, in pretty close proximity, an unusual number of *livery stables* for a town the size of ours. That they add nothing to the cleanliness of their vicinities, is most evident; that they aid materially in deteriorating the atmosphere in more ways than one, is just as certain.

"Extending from south to north almost the entire length of the city, and

dividing it very nearly into two equal parts, is the Bayou Gayoso, a natural *sewer*, that might be made, under proper management, of incalculable value, for the important purposes of drainage and sewerage. This bayou forms a junction with Wolf River, just before the latter disembogues its waters into the Mississippi. This 'natural advantage,' like many others of which our people boast, if we are not greatly mistaken, is, in its present condition, the most fruitful source of disease among us. Scattered along, on either side of it, are the little wooden temples, similar to those that adorn the alleys. They are so constructed that the deposits made in them find their way, not *into* the bayou *bank*, but *on* it; to be choked out by the heavy rains, or not, without the least seeming concern on the part of *depositors*, or the guardians of the public welfare. And, as if to give variety to its ornamental nuisances, and to 'cap the climax' of our perverseness and folly, in matters appertaining to health, *cattle and slaughter pens* have been erected, and have been permitted to continue on it, for several years, with their filth and their stench.

"The slope of the city from the bluff in front, and on the west, being to the *bayou*, and from its eastern boundary in the rear, the slope being likewise towards the same, it is evident that everything washed from the streets and gutters finds its way into this receptacle, in addition to what is placed therein by direct agencies. Besides all this, when it is remembered that the back-water from the Mississippi River, when it reaches a certain stage, finds its way into this bayou; that, during every 'June rise' of the river, the bayou is kept more or less full, according to the height which the former attains; that much of the detritus of this turbid water is deposited, during its period of rest, in this reservoir, before it recedes through the same channels by which it entered, and this at the commencement of summer, we are constrained to admit that there are here placed together, along the very centre of Memphis, the appreciable materials in abundance, from which the sun's rays evolve, in profusion, noxious exhalations to vitiate our atmosphere, and to poison those who are compelled to breathe it."

To what extent health is influenced by emanations from a soil like ours, is a question the discussion of which would be entirely out of place in a paper like this. It may not be amiss, however, to state that, in an anniversary address recently read before the Memphis Medical Society, by Dr. A. P. Merrill, it was contended that-the removal of fresh earth from one situation to another —as has been done in this city on an extensive scale in grading the streets— is, perhaps, the principal cause of the sickness which has been so prevalent during the past two years in Memphis. To the *desiccation* of this fresh soil by the heat of summer and autumn, Dr. Merrill attributes, as a cause, many of our prevailing diseases, without indulging in any farther hypothesis on the subject.

It is thought by some that the *well-water* of this place is, in a good degree, the cause of much of the bowel-complaints common to this locality. Our observation is not corroborative of this opinion. It is true, that persons are occasionally met with, who, from idiosyncrasy, conjoined with the atmospherical causes predisposing to these affections, are prone to diarrhœa when drinking freely of the water from our wells. The same thing, it is well known, often happens to those who use the *river* water. Yet, it is equally true that

these diseases have not diminished in the frequency of their occurrence since the multiplication among us of cisterns, or since the drinking of *cistern water* has become more common. We have made it a matter of inquiry, among those applying to us for advice whilst labouring under diarrhœa, to ascertain what influence, if any, the constant drinking of the different kinds of water used by our population had in the induction of this disease. The results of these inquiries have satisfied me that, with the generality of the cases which have come under my observation, the daily use of either of the different kinds of water mentioned, has had little or no influence, in the abstract, in the causation of the bowel affections prevalent among us.

It is to an *atmosphere* polluted by the gases evolved from the vegetable and animal remains so abundantly found on, and very near, the surface of the two and a half square miles which include the present limits of the city of Memphis, that we think the medical philosopher, after an impartial survey of the facts, will be disposed to attribute much of the sickness and mortality of this place during the warm season.

Before proceeding to speak of the special diseases which have prevailed here during the past year, either as *epidemics* or as *endemics*, I wish to offer a few remarks, in a general manner, respecting *them*, and the *causes* of the three divisions into which I shall arrange them.

In the *first* class will be placed *measles, malignant cholera*, and *typhoid fever*, not because there is any similarity either in the diseases themselves, or in the causes producing them, so far as we know; but in order to separate the diseases of occasional and uncertain occurrence, which prevailed here last year, from those which are our annual visitants, and that may be styled, in all truth, the endemico-epidemics of Memphis.

In the *second* class, we shall place the bowel-complaints, viz., *diarrhœa, dysentery, cholera morbus*, and *cholera infantum;* the *causes* of this group of morbid affections being different, as we believe, from the former class, as also from those constituting our

Third division, the *paroxysmal fevers.*

As the *causes* productive of the diseases placed in the first class of the arrangement we have adopted are not generally held to be the results of any known *local* agencies, however much they may be modified in their course by these latter, it will not be in accordance with the plan we have marked out for this paper, to indulge in speculations concerning the inscrutable causes inducing the three disorders placed in this division.

Of the *causes* of the diseases known and acknowledged to be *endemical*, I shall feel more at liberty to speak, as they proceed in a great measure, if not entirely, according to our opinion, from *local materials* profusely scattered over the entire limits of this city. Deposits of excrementitial and other offensive substances, in the manner before alluded to, are permitted to accumulate in heaps, either on or very near the earth's surface, in winter, which, at the commencement of the hot season, and during its continuance, undergo

the process of decomposition, in accordance with the immutable laws of nature. It is during the period when this process is going on, when the laws of chemical action are exerting their powers to the fullest extent on dead organic matters, that our annual diseases, in the forms of the different bowel affections, and the paroxysmal fevers, with their concomitant evils, are most prevalent and fatal.

The disorders of the bowels, so prevalent here in the months of May and June, are produced, we firmly believe, by the poisonous exhalations arising from the masses of filth with which Memphis abounds; or, to use the language of another, from the *miasmata* arising "from mixed animal and vegetable remains, but especially from *animal excreta*."

The *cause* producing the paroxysmal forms of fever here, as elsewhere, we believe, in common with a large majority of the profession, to proceed from a peculiar poison generated during the decomposition of *vegetable* substances under certain circumstances. This poison, of which we know comparatively nothing except from its effects, is called "*malaria*," and is different, according to the views we have adopted, both in its composition and in its effects on the animal economy, from *miasmata*.[1] To this latter we have attributed our bowel-complaints; and we will again repeat it, that the materials for both *malaria* and *miasmata* are to be found, in Memphis, in greater abundance, we are sorry to say, than in any other place of the same size in America.

It may, we think, be set down as a settled point that *two*, or more, of the poisons capable of causing disordered manifestations in the human subject, can, and often do, act upon the organism at the same time. The common opinion, verified by the almost daily observation of physicians practising in unhealthy situations, is, that the *malarious poison* exerts a greater or lesser influence on all diseases attended by febrile phenomena, not excepting the purely inflammatory class, in regions where it is known to abound by its effects on the inhabitants. And it is also true that the *miasmatic poisons*, or those produced from the decomposition of excrementitial accumulations, "where no provision is made for the removal of the polluting matters, as in unsewered villages and streets," do exert their influences on diseases proceeding primarily from other causes, and that, by the commingled actions thus originated, disease in its various forms becomes complicated; symptoms are rendered difficult of interpretation; diagnosis is made obscure; and the therapeutical management of the sick will hence require much tact and skill for its success.

From what has been said, we do not wish to be understood as asserting, that the *only* causes of the different bowel affections are the *miasmatic poisons*. On the contrary, we are well aware that dysentery prevails in rural districts

[1] For the views expressed in this paper on the poisons of *malaria* and *miasmata*, and their commingled influences in the causation and modification of disease, I am indebted to a writer in the January number of the *British and Foreign Medico-Chirurgical Review* for 1849, p. 75, *et seq.*

where the atmosphere is not polluted, as in towns and cities, by exhalations from excrementitial matters undergoing decomposition—that diarrhœa and cholera morbus often result from the use of indigestible food—and also, that the sudden checking of the functions of the skin will have the effect of inducing either part or all of these diseases.

Having in a brief and imperfect manner alluded to the *materials* and the poisonous emanations which, arising therefrom, act as *causes* of the prevailing diseases of this locality, I shall proceed to speak of the individual disorders named in our formula, in the order in which they have been placed; and first of *measles*.—This disease, as is its usual custom, prevailed in this city as an epidemic. The first cases that came under our observation, the past year, were seen early in the month of February, from which time it continued to spread, reaching its acme in June, thence gradually declining until about the end of September, when it disappeared, and was not seen again up to the close of 1852. It was, according to our views, a mild disease until the warm season set in, and it became complicated with the bowel disorders then coexistent. During February, March, and April, the sequela were slight bronchial affections, with the usual diarrhœa; both of which being readily controlled by appropriate treatment. The *deaths* from it up to the first of May were only *two*. In May and June the accompanying diarrhœa assumed a more intractable form, from the superadded influence of the *miasmatic* poison on subjects predisposed by previous disease—the *epidemic* having passed through its stages apparently surrendered its victims to the *endemic* influences of the season. Hence we find in the Bills of Mortality twenty-nine deaths recorded in these two months from measles; which is more than double the number dying from the same reputed cause during the other six months of its prevalence, the entire number of deaths for the period last named being only twelve.

It is worthy of remark, that during the eight months' prevalence of *measles*, our mortuary returns show only *two deaths from cholera infantum;* whilst for the same period of the previous year, the returns fix the number dying of the latter disease at *forty*, when the former and all other epidemical influences were absent from this place.

From the foregoing facts, the conclusion is, to say the least, legitimate, that the commingled influences of two distinct poisons—the poison causing the eruptive disease, and that originating the bowel affection—were acting at the same time on the same individuals, and after the former had spent its force, and was to some extent eliminated from the system, the latter commenced its work and carried it on to the closing scene of the pathological drama.

Malignant Cholera made its appearance here last year in the month of May. Its prevalence was greatest in June. After the middle of July, no cases of it were met with until the last days of September, from which time to the close of the year occasional cases occurred among intemperate and exposed persons, two deaths by it being reported in December.

To what extent cholera was influenced by the condition of our atmosphere at the periods of its greatest prevalence in this city, we possess no positive knowledge. But amidst the obscurity which veils the etiology of this truly formidable disease, we think it not unwise to suspect the polluted atmosphere then present, to be a predisponent aid in the propagation and development of the choleraic poison, inasmuch as the visitations of that disease have been regularly most serious and protracted during the season of the year when the endemial bowel complaints are most rife. In 1849, cholera prevailed among us in an epidemic form in June and July. And in 1851 and 1852, though not epidemic at any time during these two years, its prevalence was greatest from the middle of May to the middle of July, the precise time when diarrhœas, dysentery, and their congeners are in the ascendant. Whilst the well provided for and temperate classes of the population are suffering from the latter, the former selects for its victims the intemperate, and those occupying filthy, badly ventilated, and crowded habitations.

Cholera in most instances commenced here, as usual, with diarrhœa, which is its *first stage*. When this was neglected, the discharges from the bowels gradually became more copious and frequent, until, at different periods in different cases, they were accompanied by nausea, vomiting, cramps in the lower extremities, extending often to the abdominal and other muscles; with increasing thirst; a failing pulse; suspended biliary and urinary secretions; colliquative perspiration, and a most rapid collapse of the vital functions in fatal cases. Of all the symptoms attendant on cholera, our experience has taught us to dread no single one so much as *profuse perspiration*. We have seen patients recover after the stage of collapse had continued for some time, when the skin kept *dry*, or nearly so; but we have yet to witness the first case of recovery where the reverse obtained, although the sick may have been seen, and prescribed for, at a time when the pulse still retained a degree of strength and volume.

The most remarkable characteristic of cholera, as we have seen it in its sporadic form for the two past years in Memphis, has been its great fatality. It was by far more unmanageable during the periods named than in 1849, when it was epidemic. Each and every plan of *treatment*, so far as we can learn, has signally failed, though all the tried and vaunted remedies have been faithfully applied. Of each of the different plans pursued, it would be superfluous in this place to speak, as we have nothing of interest concerning them to offer. We can but deplore the melancholy truth that, as yet, the profession are ignorant of any certain means calculated to arrest the course of this awful scourge, the number of deaths from which in this city, last year, was set down at *seventy-five;* by far the largest mortality caused by any other single disease!

The opinion, that *typhoid fever* is not apt to prevail in regions of country where the paroxysmal forms of fever are endemial, is quite general we believe with medical men. The comparative rareness of any extensive prevalence of

the disease in regions known to be the habitats of the latter class of fevers has been favourable to this view of the subject. But, if we are not mistaken, the typhoid form of fever is becoming more and more common in localities famous for the prevalence of remittent and intermittent fevers; and that a modification of the opinions heretofore entertained on this point, is not unlikely to be effected by the recorded observations of physicians located in malarious regions of country.

It is certainly true, that the disease is on the increase in this section, notwithstanding the fevers attributable to malaria have not been in anywise diminished. Eight years ago, when we first came to Memphis, *typhoid* fever cases were rare, and the persons affected were mostly young men recently arrived from more northern latitudes. In a conversation held during the first year after my removal hither, with the late Dr. Wyatt Christian, who was the eldest resident physician at the time, I inquired if typhoid fever had ever prevailed to any extent in this place, or its vicinity, since his acquaintance with it. His reply was, that so rare was the disease within the range of his practice (and it was extensive), that he was not certain whether a well-marked case of it had ever come under his observation.

Our mortuary records are confirmatory of the fact of an increase in the mortality from this cause. And although it may with considerable truth be said that the record is not entirely reliable, so far as the *names* of diseases are concerned, yet observation fully *sustains* the fact of an increase annually, we can safely say, of *typhoid fever* cases, and, consequently, an extension yearly of the number dying therefrom.

Louis attributed this form of fever to a change in the dietetic habits of those who had resided only for a short time in Paris, as most of the cases which came under his cognizance were young persons whose sojourn in the city had not been long. A writer in the number of the *British and Foreign Medico-Chirurgical Review*, already referred to, ascribes the continued fevers of the British metropolis to the miasmata proceeding from the fecal accumulations contained in the cesspools, and other depositories of filth, in London. But neither of these views will satisfactorily account for the origin and prevalence of the disease in rural districts, where, in some sections of our country, it has become a terror, from the frequency of its visitations, to the people living in long-settled places, and in otherwise highly salubrious situations, remote from towns and cities.

If *typhoid fever* owes its origin to *malaria*, as is contended for by many highly respectable writers, for whose opinions we entertain the greatest respect, it must be a malarious poison differing essentially from that giving rise to the paroxysmal fevers. In the New England States, where the intermittent and remittent fevers have long since ceased to exist, the typhoid form prevails most extensively; and in the sickliest regions of the South, where the continued fever ought to be very prevalent, if dependent for its causation on that which produces our malarious diseases, we find typhoid fever to be of

rare occurrence, compared with the extensive prevalence of the fevers everywhere recognized as the legitimate offspring of undoubted malarious parentage. So different, moreover, is the typhoid from the purely paroxysmal fevers, in its symptoms, its course, and in our inability to abridge its duration, that we are disposed, if not to deny, at least, to doubt the validity of the opinion which ascribes the disease and its causation to the *malarious* poison.

In nearly every case of typhoid fever which has come under our care, the attendant *symptoms* have manifestly indicated lesions of the nervous centres, and of the intestinal mucous membrane. These lesions seem to constitute the rule in the pathology of the disease, as it is met with among us. Whatever secondary complications may be wanting, in different cases, marked derangements of the innervation and of the bowels are seldom absent.

The formative stage of the disease is usually slow and insidious. Coming events are not generally foreshadowed by the earlier symptoms, among the most prominent of which is a loose state of the bowels. During this period, cases seldom come under our cognizance; and even after the disease has made farther progress in its course, it is not always an easy matter to decide, especially at a time when other forms of fever are prevailing, that the case is one of the typhoid type. Indeed, it often happens that the true character of the disease, in its earlier stages, is not fully recognized until after anti-periodic remedies have failed to arrest it. The fever still continuing to progress, attended by hot and dry skin, frequent pulse, meteorism, epistaxis, with increasing delirium, &c., ultimately mark the true character of the disease, if not earlier suspected.

Whether the affection be recognized early or at a more advanced period in its progress, *treatment*, here, as is generally acknowledged elsewhere, has but little if any control over its course and duration. Onward is its inexorable career, despite professional efforts to arrest its course, until its victims pass through its stages to convalescence, mere breathing skeletons, or are consigned to the grave!

Viewing typhoid fever as a specific disease having a definite course to pursue, our usual plan is to *watch* rather than to expect to *subdue* it. To control the secondary complications, if they appear, by appropriate remedies, so as to simplify the original disease by the removal of any local organic disturbances which may be superadded to it during its course, and to guard carefully the period of *crisis*, which comes sooner or later in almost every case, by suitable means, we have found to be attended with better success than a more active and energetic treatment pursued with a view to arrest its progress.

Notwithstanding the views just expressed, we have been induced, on the testimony of others, to give the "*abortive treatment*," as it is called, a trial. We have administered the sulphate of quinia in quantities varying from a few grains to half a drachm, at a time, and have repeated these doses until satisfied that the medicine was doing no good; the only marked effects from its em-

ployment being, in some cases, a diminution of the frequency of the pulse, but very generally an increase of the restlessness, the sleeplessness, and the tinnitus aurium and deafness symptomatic of the fever. It has occasionally happened to us to meet with cases of typhoid fever in our practice, at seasons of the year when the paroxysmal fevers were prevailing, at so early a period after their commencement as to render it difficult, at least for us, to determine from the symptoms then present the form of fever to which they belonged; and the very *failure* of an energetic treatment, in which *quinia* formed an important part, was, we confess, the first thing to cause us to suspect the nature of the disease with which we had to do, and to lead us to modify our course accordingly.

Judging from the symptoms observed during life, which we have carefully endeavoured to watch and to analyze, and also from the appearances diligently investigated in several *post-mortem* examinations made in our presence, we are led to believe that pathological disorganizations of important viscera, proceeding from inflammation and its results, are rarely the cause of death in this disease as it has appeared among us. Our patients die, we would say, in typhoid fever, from a deficiency of that vitalizing principle in the blood, which imparts to the nervous system the power requisite to sustain and keep in action the organic functions.

After the foregoing sketch of the three diseases placed in our first division, with the attempt to show that the first two were modified to some extent by the *local* causes existing in this city at the time of their prevalence, I shall next endeavour to give a short account of the *endemics* that visited us last year, in accordance with the plan proposed at the outset.

The diseases enumerated as resulting from *local miasmatic poisons* engendered from the decomposition of animal and vegetable matters, "but especially from animal excreta," are the various bowel complaints: and first in order comes—

Diarrhœa.—This disease is not confined exclusively to any particular season, as our mortuary records give returns of deaths from this cause in every month of the past year, with the exception of February. This fact does not, as we conceive, invalidate, in the least, the views we formerly expressed concerning the influence which heat and accumulated filth exert in its production. During the six warm months in the year, from May to October inclusive, we find 41 of the 54 deaths from this disease to have occurred; a circumstance sufficient to prove that season manifestly has a marked influence over its prevalence.

The form which is usually met with among us is that called, from the character of the discharges, *serous* diarrhœa. Pain in the bowels, febrile excitement, or constitutional disturbance in any marked degree, rarely accompany the liquid, and, more or less frequent, alvine dejections, at the commencement. It is, in a majority of cases, only after the disease has continued some time that the functions of the stomach and liver become implicated, as is

evinced by loss of appetite, increased thirst, and the whitish colour of the stools.

We are not aware of any particular conditions or symptoms preceding the disease sufficiently often to constitute a premonition. Indigestion and flatulency are occasionally its forerunners; but most frequently its advances are gradual, the individuals attending to their accustomed employments, and very often neglecting to alter the diet until they are forced to seek for medical advice.

Of all our diseases, there is no one to which the unacclimated is so subject as this. It is the initiative to the climate, and the subsequent disorders which this locality is likely to impose on the new-comer.

Fortunately for all concerned, diarrhœa, in its most prevalent form, yields readily to treatment in most cases. If prescribed for early it is easily arrested by astringents and opiates, singly or combined; with attention to diet. The mineral and vegetable astringents are both useful. Of the articles of this class we have a partiality for the sulphate of zinc, and the tannic acid, in preference to all others. The *tonic* as well as *astringent* properties of these medicines commend them specially to our attention in a disorder evidently connected with a relaxed and debilitated condition of the intestinal canal. When given with *opium*, they very rarely fail to check the discharges in a short time. The mas. hydrarg. or hydrarg. cum cretâ we generally advised to be taken for one or two nights, to maintain the healthy function of the *liver*, as the natural office of the organ is apt to be interfered with by both the disease and the remedies used to subdue it.

Just antecedent to, and during the prevalence of malignant cholera here last year, and also in 1851, a form of *diarrhœa* prevailed in common with, but differing from the foregoing variety, inasmuch as it was attended with fever, frequent pulse, coated tongue, thirst for cold drinks, nausea and vomiting, a scanty and high-coloured urine, and frequent painful discharges from the bowels of liquid green or black-looking matters. This form of disease, to which the terms "*bilious diarrhœa*" are not inappropriately applied, is not of common occurrence in this city, but appears, in some way, to be connected with a choleraic atmosphere for its causation. Be this as it may, it is certainly a very painful affection, judging from the suffering apparently experienced by those labouring under its attacks.

Calomel and opium, in doses sufficient to meet the exigencies of different cases, were the remedies principally relied on by us for its cure. We generally found the disease to yield, if not before, as soon as the constitutional effects of the mercury became manifest. When the accompanying fever was clearly of the *remittent* type, the administration of the sulphate of quinia formed an essential part of the treatment, and aided greatly in bringing about a speedy termination of the morbid actions.

Dysentery did not prevail to any great extent last year. The cases of it which came under our care were generally mild. A large majority of them

were unattended by much constitutional disturbance, the disease consisting, mainly, in a slight inflammation of the lower portion of the *rectum*. This mildness of the disease, we judge, was general throughout the city, from the fact that only thirteen *deaths* are reported to have occurred from it during the year.

The *symptoms* were such as to render the diagnosis remarkably easy. The tormina and tenesmus were comparatively slight. The discharges from the bowels consisted mainly of mucus, more or less mixed with blood, small in quantity, the passing off of which being, as is common, attended with considerable straining, and a desire to continue long in the act of defecation.

The *anodyne* treatment was that from which we derived the most marked and decided benefit. The disease being generally, as before observed, entirely local and uncomplicated, anodyne enema of starch and laudanum, or opium in substance or in some of its numerous preparations, administered by the mouth, with an occasional laxative, constituted our chief remedial means. A favourite prescription with me was pulverized rhubarb and pulv. ipecac comp. in such doses as different cases required.

Dysentery has at no time since our acquaintance with this city, prevailed in it as an epidemic. Every year, nevertheless, furnishes cases of this complaint for treatment, and among them some that prove quite intractable, mostly among persons debilitated by other causes; but, as a general rule, we are disposed to view it, from what we have seen, as a mild disease, owing its origin to the miasmatic influences which produce diarrhœa, taking on the dysenteric form from some inexplicable morbid proclivity, predisposing the rectum to disease in some individuals, rather than other portions of the intestines.

During the warm months, when the digestive organs are naturally disposed to be easily disordered, it occasionally happens that indulgences in the use of improper food give rise to nausea, vomiting, and purging, or, in other words, to *cholera morbus*. Every season furnishes cases of this disease, in Memphis; but we are satisfied that a portion of the deaths recorded under this head last year, were caused by genuine *cholera*, but were charged to the former for reasons not commendable because intended to deceive.

Cholera morbus, if seen early, is not difficult to check in its course by proper remedies. If neglected, it shortly assumes a threatening aspect, according to our observation of it in this place.

As patients are seldom seen until after the contents of the stomach and bowels have been removed by vomiting and purging, evacuants are seldom required at this period; the pressing indication is to allay the irritation of the primæ viæ as speedily as possible. With the application of strong sinapisms to the epigastrium and extremities, our reliance for prompt relief, is on *morphia and ice*. One grain of the former is administered at a dose, dissolved in a tablespoonful of ice-water. If this is ejected from the stomach, another portion is given immediately, advantage being taken of the interval of repose of the stomach which succeeds vomiting. The retention of a portion

or two of the morphia usually restores quietude, when aided by small quantities of powdered ice frequently repeated. Some hours after the patient has recovered from the urgent symptoms, we advise a mild aperient to be taken, which, in most cases, is all that is necessary to secure perfect convalescence, if proper attention be paid to the diet.

Common rumour has stigmatized Memphis as the *graveyard of children.* The mortuary records of 1852 show the deaths among this interesting class of our population, of five years of age and under, to be 263; which number is a large fraction over one-third of all the deaths among our citizens for the year! An examination of the record also shows, that 117 of these children died during the months of May, June, and July, the season when bowel complaints are always most prevalent in this town, as has already been made apparent. It will, in view of the facts just stated, appear almost incredible, that our bills of mortality should only give *five deaths* from *cholera infantum* during the whole of last year.

When speaking of *measles*, I stated the fact, that most of the mortality attributed thereto resulted from the bowel affections, which succeeded immediately on the subsidence of the former. The cause of death, it was then said, was not from the *antecedent*, as stated in the bills of mortality, but from the *subsequent* disorders, and amongst these the cholera infantum was certainly not the least.

The paucity of deaths on our records, last year, from the disease under consideration, is likewise attributable to the circumstance, that not a few of those placed to the account of malignant cholera, and inflammation of the brain, ought, in justice, to have been set down to *cholera infantum*. The table to be found near the close of this paper, showing the number of deaths, in each month of 1852, from the diseases treated of in this report, with a few others, will aid, we are inclined to believe, in sustaining the opinions just expressed.

It is during the *second summer*, when children are cutting the molar teeth, that the cholera infantum and other bowel complaints prove most destructive to the young. The process of dentition appears to favour the active operation of the miasmatic poison, which, in accordance with our views, causes these disorders in this place, as well as in other towns and cities. The only *prophylactic*, therefore, that can be depended on, is the removal of the children most disposed to "the summer complaint" to the country, before the commencement of the season of its prevalence. Even after the disease has made its attack, speedy relief is most to be expected by removing the sufferer out of the polluted atmosphere which produced it; for as long as he is kept exposed to the *cause*, the chances of a cure must be unpromising.

From the sulphate of quinia, administered with a view to control the accompanying fever—supposed by some to be of the remittent type—we have derived little or no curative advantage in the treatment of cholera infantum. My experience, on the contrary, has satisfied me that it exerts no salutary influence, to say the least, at an *early* period of the affection, and I now rarely

prescribe it except, in the latter stages, as a tonic to sustain the patient's strength, after the urgent symptoms have been subdued by *mercurials* and *anodynes*, with such adjuvants as particular symptoms may require.

Towards the latter part of July of the past year, the bowel complaints of this locality were rapidly disappearing, and it was interesting to witness how the lingering cases, which then came under cognizance, were complicated with the diseases about to take their places. It was at this time that the *paroxysmal fevers* were becoming common, all coexisting maladies submitting, in a great measure, to the reign of *malaria*, and acknowledging their fealty to it by assuming the forms of *periodicity*, which are its well-known characteristics.

The *remittent* is the form of fever most prevalent here in July and August. When the nights begin to become cool and chilly in September, and thence to the close of the sickly season, *intermittents* become quite common, and are oftener met with than the former. The remittent fever continues to prevail, however, until arrested by frost, its symptoms increasing in intensity as the autumn advances.

Of the two common types of remittent fever, the quotidian and double-tertian, the latter was much the oftenest met with by me last year. Among the cases of intermittent fever which came under my observation during the same period, the *tertian* was by far the most common. We have often been surprised at the comparatively few cases of the *quartan* type of intermittent fever met with in this region—the old-fashioned "third-day fever and ague," which was wont to take such *feeling* liberties with our person in years gone by. Can this be accounted for on either of the following grounds, viz., that the poison causing intermittents exists in greater abundance now than formerly; or else in a more concentrated form? or is it in consequence of our population being enfeebled and enervated by constantly inhaling an impure atmosphere?

Concerning our *intermittent fevers*, it will suffice to say that they mostly come on without much if any premonition, the seizure being generally sudden and unexpected. The quotidian is most apt to make its attack in the morning, or during the forenoon; whilst the tertian selects oftenest the *after* part of the day for its invasion.

The three stages of the disease are, in a majority of instances, well marked; the *second* being apparently governed, in regard to duration, by the *first;* that is to say, if the latter be a protracted rigor, the succeeding hot stage is short, and *vice versa*. When the *first* stage is long-continued, and is attended by coldness of the surface, a scarcely perceptible pulse, intense thirst, extreme restlessness, or a tendency to coma, &c., the reaction which follows, if reaction there be of a febrile character, is exceedingly slight, and the patient is indeed fortunate whose circulation can be restored to a point approximating to the healthy standard. Intermittents pursuing this latter course constitute our *congestive fevers*, and it is only when the disease takes on this malignant form, from neglect or otherwise, that it proves fatal under the physician's care.

The occurrence of malignant cases of intermittent fever would be more frequent in this place, we have every reason to believe, were it not for the free use made of the sulphate of quinia after the *first* paroxysm. Experience and observation have taught us that the mildness of the first attack is not a reliable guarantee that the succeeding paroxysm will be without danger. No precious time, therefore, is lost in "preparing the system" previously to administering the great febrifuge. If the indications require the use of other means, they are prescribed conjointly with quinia; our chief concern being to bring the patient under its speedy influence, and to maintain its effect on the nervous and vascular systems until the disease is subdued.

Relapses of intermittent fever, as might reasonably be expected, are of every-day occurrence in Memphis, and prove, in many instances, most annoying to both patient and physician. Our variable climate, during winter and spring, serves as an exciting cause; and the malarious atmosphere of summer and autumn supplies fresh material to the unextinguished embers still alive in the system.

Contrary to what was expected after the prevalence of malignant cholera, the fevers of this climate succeeding that disease, in both the past years, manifested, during their course, no unusual tendency to become complicated with an irritable condition of the intestinal mucous membrane. Indeed, it is a remarkable fact that, so far was this tendency from being present, the cases of remittent fever, which fell under my observation, were usually attended with a *constipated* state of the bowels not often met with, in this locality, at any season.

Like the intermittent, the *remittent fever* was not usually preceded by any well-marked stage of incubation. The disease, in most cases, came on suddenly and without warning, with a well-defined chill, or rigor, generally of short continuance, and seldom recurring afterwards; followed by fever and the symptoms common to febrile reaction; the paroxysms terminating in a more or less perfect remission, according to the type the disease assumed, being less decided in the *quotidian* than in the *double-tertian*.

The symptoms attendant on the remittent fever, the past season, would entitle it to be placed with the variety known as the "hepatic," or "bilious." Functional derangement of the *liver* constituted a prominent feature of the disease, as was clearly manifest in the vomiting of bilious matters, the yellowness of the skin and eyes, as well as by the colour of the stools, and the appearance of the urine. Occasional cases were also met with, of a more grave character, in which the biliary secretion was entirely suspended. In these, there was no bile in the matters ejected by the stomach; the stools were of a whitish cast; the urine was heavily loaded; and the jaundiced hue of the body was so well-marked as to leave no doubt concerning the organ bearing the onus of the disease.

In the treatment of the bilious remittent of the past season, *bloodletting* by venesection was not resorted to by me in a single instance. Rarely, indeed,

does the pulse indicate the use of the *lancet* in the treatment of any of the diseases occurring in this place, as it is almost invariably found to be soft and unresisting under comparatively slight pressure. And when venesection has been resorted to with a view to control some urgent symptom in this disease, and even in those of an undoubted inflammatory character, the opinion of the profession here, so far as we have heard it expressed, is that it is of questionable efficacy, and when seemingly it is most needed, is illy borne by the sick.

The indications during the past sickly season, presented by the symptoms attendant on our remittent fever, were to allay gastric irritation when present; to establish healthy secretion; overcome constipation; and above all, to prevent as speedily as possible the recurrence of anticipated paroxysms. As full details on each of these points would be inconsistent with the design of this paper, it may be sufficient to say, that anodynes, mercurials, and purgatives, were employed by us as the circumstances of each case required the use of one or the other or of all of these. These remedies are employed by me, not on account of their *curative* powers over the fever of which we are speaking, for that may well be questioned, but in order to *counteract* the effects on the functions of organic life of *the poison* causing the disease, our reliance for the *neutralization* of the poison itself, and its entire eradication from the system being upon quinia the *magnum remedium*.

In the administration of this most valuable agent, we do not wait for an entire remission of the fever. We commence its use with a knowledge of its perfect safety and certain success, at any stage of the malady, if the quantity administered be proportioned to the emergency demanded by the symptoms. We have found great *frequency of the pulse*, whether met with during the exacerbation or in the imperfect remission, to require larger doses of the febrifuge than any other condition we have observed connected with the remittent form of fever. The tests of the suitableness of the doses of quinia administered are a reduction of the frequency of the pulse, with an increase of its volume, and a moisture of the skin. Should the number of the heart's pulsations not be lessened in *three* hours after the first portion has been taken, we consider that the quantity then given was not sufficient for that particular case, and another and larger dose is administered.

When the nervous and vascular systems are brought under the influence of the quinia, our rule is to maintain its effect by diminished doses until the paroxysms ceased to return. But then we do not discontinue the remedy at once, our experience being that patients suffer less from its effects, by letting down their nervous systems gradually, as it were, from the state of exalted excitement consequent on the use of the remedy. Given in this manner, we are not often troubled with after-complainings of loss of hearing or impaired vision. This is partly due, no doubt, to the fact that we seldom meet with cases, in this locality, of remittent fever requiring larger doses than *ten grains*

at once, followed afterwards by *five*-grain portions at such intervals as we may think the requirements of different cases demand. For patients peculiarly susceptible to the effects of the *sulphate* we substitute the *valerianate* of quinia, as the latter, though equally potent, does not produce so much distress.

The sickly season of last year was unusually protracted, owing to the lateness of the appearance of cold weather. In this particular, as in most other meteorological conditions, the past differed essentially from the preceding season. On the mornings of the 28th and 29th of September, 1851, we were visited by unusually early frosts; whilst in 1852, a degree of cold sufficient to check the growth of vegetation was not felt here until the night of the 8th of November, thus making a difference of more than a month last year in favour of the continuance of the autumnal diseases; these, as was before remarked, being more difficult to manage than at an earlier period of the year, whether they be primary or relapsed cases.

At a late period of the prevalence of the sickness last fall, I encountered a few cases of an anomalous form of fever—as did some others of my professional friends—which I confess myself at a loss where rightly to place in the nosology of febrile diseases. These cases came under observation at a time when scattering cases of cholera were occurring, and it is not improbable, were the production of the commingled influences of the *malarious and choleraic poisons*. Be this as it may, the symptoms, as well as the failure of the treatment found so efficacious in the purely paroxysmal fevers, serve to place it at a remote relationship, if, indeed, it has any affinity to these diseases. As I made short notes at the time of its prevalence of the leading phenomena which attended its course, I will transcribe from them such parts as I think may prove interesting.

The cases of fever above referred to, were seen during the first and second weeks of November, being the week before and the week after the first frost of last autumn. Its early cessation, after the commencement of cold weather, would seem to indicate its connection with *malaria*, but yet it differed in the malignity of its symptoms, from the well-marked cases of remittent fever prevailing at the same time.

The attack, in most of the cases which came under our observation, was not preceded by previous indisposition. Chilly sensations, or a well-marked cold stage, of short duration, ushered in the disease. The reaction which followed was attended with intense heat of the surface; eyes more or less injected; circumscribed flushing of the cheeks; frontal headache with pain in the back; pulse ranging in frequency from ninety to one hundred and twenty beats in the minute in different cases, and continuing throughout the entire course of the attack feeble and unresisting; the tongue at the commencement gave but little evidence of departure from a normal appearance, but very soon began to show a line of dry and elevated papillæ extending from the tip of the organ along its centre backward, which daily continued to widen and assume a dark-

brown color, exhibiting a notable contrast with its smooth and red tip and edges. The thirst for cold drinks was intense. There was much tenderness on pressure over the epigastrium. Nausea, with vomiting of pale green fluids were troublesome symptoms. The bowels were constipated until moved by medicine, when the dejections were fluid, resembling in color the matters thrown off by vomiting. The urinary secretion was small in quantity and highly coloured, giving out a strong ammoniacal odour. Hemorrhage from the nose was common; in a few it occurred from the nose and bowels; and in one case which we attended, in addition to hemorrhage from the parts named, blood was freely lost from the *genitals* two weeks after the last menstrual period. Sleeplessness and jactitation were absent in no instance. There was but little if any delirium present in any of the cases. Intellect clear. No eruptions discoverable. Great prostration of the vital forces absent in no instance.

The duration of the disease was from five to fifteen days, most of the cases being convalescent during the first week. It had, like the continued fevers, its morning periods of partial remission, but they were not the clearly-marked remissions of the paroxysmal fevers prevailing at the time.

Taking into consideration the unpromising character of the symptoms, the disease yielded more readily to treatment than would appear probable. The *gastro-intestinal mucous membrane*, which, as has been before mentioned, was so exempt from implication in the *remittent fevers* of the season, was now the part most ostensibly and seriously involved in the morbid manifestations attendant on the form of fever of which we are speaking.

The remedy which in our hands exercised the most beneficial influence over the symptoms was mercury. After the bowels were evacuated, our reliance was placed on small doses of calomel and opium, repeated as often as the urgency of the symptoms in different cases required, and steadily continued until the disease yielded. Marked improvement of the symptoms invariably became apparent when the constitutional effects of the medicine were felt, but not before. Local depletion, and counter-irritants to the epigastrium, were highly useful adjuvants, as was ice in powder, in lemonade, or in pure water. These latter, when freely allowed in small quantities at a time, and frequently repeated, contributed much towards allaying gastric distress, and thereby adding to the comfort of the sick. The infallible remedy in the treatment of *periodic* fevers did not succeed in "cutting short" the course of the disease under notice, though a full and fair trial was made with it in several instances. Even as a tonic, in small doses, given after the subsidence of the fever, quinia did not appear to answer as well as the mineral acids.

The quantity of blood lost by some of the patients, and the manner in which the apparently prostrated vital energies sustained the loss, were truly astonishing. So far from being really injurious, we believe the hemorrhage from the bowels was of signal service in relieving the congested capillaries of

the intestinal mucous membrane, as a fatal termination occurred in no instance where this condition was present. To restrain the hemorrhage within the bounds requisite for the patient's safety, as well as to impart the salutary influence which, it is very generally believed, it is capable of exerting over the diseases of mucous membranes, the spirit of turpentine was administered in small and frequently repeated doses, with undoubted advantage.

It is a fact worthy of note that, so far as we have been enabled to learn the subsequent history of these cases, not an instance of *relapse* has supervened since recovery, now four months after the cases were under treatment. Whether this circumstance, taken in connection with the malignant character of the symptoms attendant on the disease we have so imperfectly portrayed, should give just cause to dread the future, in this city, if the past neglect of every measure to improve its salubrity continues, we leave to the decision of those who are better informed than we profess to be in the etiology of febrile diseases.

Before closing this paper, it will not be amiss, perhaps, by way of supplement, to add that an unusual number of cases of abscesses have been presented to the observation of the profession, in this place, in the course of the past two years especially. During the hot weather of 1851, the great number of *boils* and *felons* which were then seen was attributed to the excessive heat of the summer of that year; but as the same thing happened the past season, to a greater extent, if we mistake not, than previously, it is not unlikely that we have been subjected to the influences producing the local disorders called, in other places, the "*furunculoid epidemic.*"

The subjoined table, compiled from the Records kept by the Secretary of the Board of Health, will serve for reference in connection with the statements made in the preceding pages. It might have been greatly extended; but my design in compiling it was to present, not a full table of all the causes inducing our mortality, but, particularly, the number of deaths occurring in each month from the diseases mentioned in this paper, in order to show, from the mortuary records, a corroboration of our statements respecting the seasons of their greatest prevalence. The few other diseases included in the table we believe will be suggestive of reflections, and not without interest.

If to the 706 deaths reported by the Secretary of the Board of Health be added the 114 who died at the Memphis Hospital, we have a total of 820 deaths in this city, for the past year, "in a population of 10,608, allowing that population to have increased 20 per cent." since the census of June, 1850. According to these figures, the mortality last year in Memphis was 7.73 per cent.! Dr. Merrill, in a recent able and very interesting anniversary address, read before the Memphis Medical Society, and since published in the *Medical Recorder*, estimates our population as not exceeding 10,000 last year, and the mortality, consequently, at 8.20 per cent., wanting a very small fraction only of being *one in every twelve!*

DISEASES.	January.	February.	March.	April.	May.	June.	July.	August.	Septber.	October.	Nov'ber.	Decmber.	Total.
Cholera, malignant	1	...	...	...	6	30	16	...	6	3	11	2	75
" infantum	...	...	...	1	...	1	...	...	...	1	1	1	5
" morbus	...	...	...	1	1	2	1	...	...	5	5	...	15
Consumption	3	3	2	3	4	2	9	7	6	5	5	5	54
Croup	2	...	...	...	...	...	1	...	...	1	1	1	6
Diarrhœa	1	...	2	1	9	8	11	1	4	8	6	3	54
Dysentery	...	1	...	...	...	3	...	1	1	3	2	2	13
Fever	...	...	...	...	...	...	3	...	...	...	...	...	3
" bilious	1	...	...	...	...	3	2	3	2	1	1	...	13
" congestive	3	1	1	1	1	...	8	2	8	4	3	1	33
" intermittent	...	...	...	...	...	...	1	2	1	3	...	...	7
" typhoid	1	...	2	2	1	6	5	10	1	6	4	3	41
" typhus	...	...	...	...	...	...	1	...	...	...	...	...	1
Gastro-enteritis	...	...	...	...	...	2	3	1	1	...	...	...	7
Hepatitis	...	...	...	...	...	...	1	...	...	...	...	...	1
Inflammation of bowels	1	2	...	2	...	7	...	1	1	2	...	1	17
" brain	1	2	1	1	1	7	9	2	1	2	...	1	28
Measles	...	...	1	1	8	21	6	4	...	...	...	...	41
Pleurisy	1	...	...	1	...	...	...	...	...	...	...	...	2
Pneumonia	5	3	4	3	1	...	...	...	...	2	2	6	26
Other diseases, &c.	7	13	13	15	12	17	13	15	21	8	10	16	160
Diseases not specified	11	7	4	3	11	10	14	9	14	10	5	6	104
Totals	38	32	30	35	55	119	104	58	67	64	56	48	706

It is believed, and has been asserted by high authority, that *phthisis pulmonalis* is not only not so prevalent in malarious as in nonmalarious regions, but, also, that by a residence in localities confessedly abounding with malaria, the consumptive invalid might reasonably expect a permanent cure. An inspection of the foregoing table will show, as far as it goes, that facts are not in accordance with this opinion. *Pulmonary consumption*, as well as *typhoid fever*, is undeniably on the increase in Memphis, where *malaria* is almost as abundant as around the "Pontine Marshes."

Nor is this all. An examination of the preceding table likewise informs us that *consumption* has not only consigned victims to our cemeteries during every month of the past year, but that exactly *one-half* of the whole number of deaths caused by it occurred from July to October inclusive, the very season of the year when *malaria* is in most abundance, and is exerting its power to the fullest extent.

No one will run the risk of making himself the subject of ridicule, by asserting that these cases are *strangers* who have come hither to spend their *summers* on account of the healthfulness of the place.

As far as the facts furnished by one malarious locality can be depended on, it may be asserted that an exemption from pulmonary consumption is not attainable by a residence in a sickly place, much less ought a cure to be expected under such circumstances.

MEMPHIS, *March* 10, 1853.